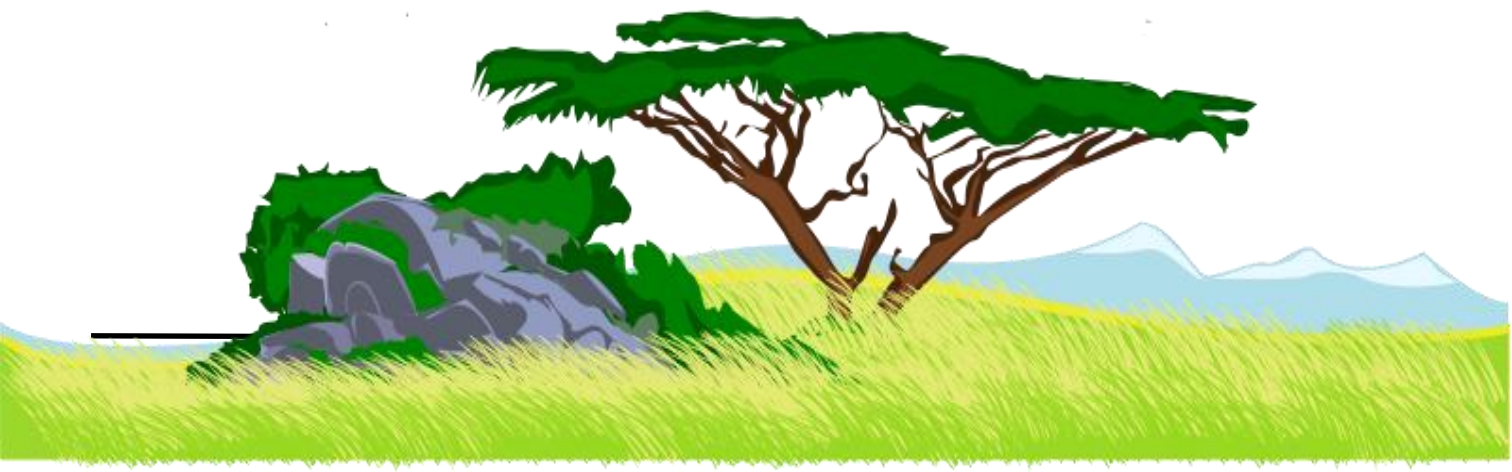
Activity Pack: African Animals

This pack is designed to provide teachers with information to help you lead a trip to Colchester Zoo focusing on African Animals



How to Use this Pack:

This African Animal Tour Guide pack was designed to help your students learn about African animals and prepare for a trip to Colchester Zoo.

The pack starts with suggested African animals to visit at Colchester Zoo including a map of where to see them. The next section contains fact sheets about these animals. This includes general information about the type of animal (e.g. where they live, what they eat, etc.) and information where to find them at the zoo. This information will help you plan your day, and your route around the zoo to see the most African Animals. We recommend all teachers read through this pack and give copies to adult helpers visiting with your school trip.

The rest of the pack is broken into “Pre-Trip”, “At the Zoo”, and “Post-Trip”. Each of these sections start with ideas to help teachers think of ways to relate African animals to other topics. There are also a variety of pre-made activities and worksheets included in this pack. Activities are typically hands on ‘games’ that introduce and reinforce concepts. Worksheets are typically paper hand-outs teachers can photocopy and have pupils complete independently. Teachers can pick and choose which they want to use since all the activities/worksheets can be used independently (you can just use one worksheet if you wish; you don’t need to complete them all).

The activities and worksheets included in this pack are for a range of ages in KS1 and KS2, and a few suitable for early KS3. Activities have the suggested age range and other information on the left-hand side of the page underneath the description. Worksheets have the suggested age and subject in the upper right-hand corner of the page. These are guidelines only. Feel free to use the activities and worksheets for students of all ages.

We suggest using the “Pre-Trip” activities/worksheets prior to your trip to familiarise your pupils with vocabulary, context, and the animals they will see during your trip. The “At the Zoo” activities/worksheets typically require information your pupils can gather while they are at Colchester Zoo, and are designed for completion during your school trip. These worksheets also contain spotter’s guides where your pupils can tick off which African animals they spot. The Post-Trip activities/worksheets are designed to be used after your visit to help consolidate learning and build on information gathered during your school trip. Within these sections, the activities/worksheets can be used in any order.

If you would like any more guidance, or have any questions about any of the information contained within this pack, please contact our Education Department at education@colchesterzoo.org

Contents

African Animals to See at Colchester Zoo:

Download a more detailed map from our website:
www.colchesterzoo.org

African Animals to See:

1. .Lion Rock and Suricata Sands: see the **lion** and the **meerkats**. Go up the tunnel to the lions' indoor house to see the **fennec fox.**

2. .Elephant Kingdom: see our four African **elephants.**

3. .Kingdom of the Wild: our mixed African animals paddock housing: **white rhino**, **ostrich**, **zebra**, **giraffe** and **greater kudu** (antelope). Go inside the building to see more animals including: **pygmy hippos**, **patas monkeys**, and **aardvarks** (entrance to aardvark burrow underneath the building close to the lake).

4. .Edge of Africa: see the **spotted hyena**, **mandrill** monkeys, **warthogs** and **cheetah.**

5. .Lost Madagascar: ride the train to the free-roaming **lemur** enclosure. Pupils must be accompanied on the train. Check on the day to see the train opening times.

6. .Chimpanzee Lookout: see the **chimpanzees.**

Please note that animals on display may change

Animal Encounters at the Zoo:

Many of the Animals mentioned in this pack may have a dedicated Encounter happening whist you are at the zoo.

An Animal Encounter may involve a talk and Q&A from the keepers who look after that species, opportunities to see the animals being fed, a chance to see the animals interacting with new enrichment and maybe even training demonstrations. However, no aspect is guaranteed as this is dependent on the schedule of the keepers and animals so may vary day to day.

We recommend downloading the Colchester Zoo App prior to your visit to see what Encounters are happening on the day of your visit.
Use the QR code to do so.

ANDROID APP ON Google play

Download on the App Store

You can also visit www.colchesterzoo.org to see the 'Daily Timetable' for a full list of all talks, feeds, and shows and their times

Please note that times of feeds may change without notice.
Visit the website and ask at entrance for an up to date schedule .

Lions

Habitat: Desert, savannahs and grasslands
Distribution: Africa, southern Sahara to South Africa
Diet: Variety of animals including birds and mammals
Longevity: About 15 years in the wild, up to 24 in captivity
Status: Vulnerable (IUCN Red List)

Lions are the largest mammalian predators in Africa. They hunt large, ungulate prey such as Wildebeest, and zebra. They live in family groups, known as prides. In these groups, the lionesses do most of the hunting together as a team. The males role is to defend the territory and the pride from other males, hence their larger size. Despite being a large predator, lions spend most of their day sleeping and would rather scavenge and steal food rather than hunt for it. They mainly look for food at night.

Due to the increasing human population, lions are considered problem animals and people shoot wild lions. Because of this persecution, lions are rare in Africa except in protected game reserves and national parks.

Male and female lion are easy to tell apart, the males having large amounts of fur around the head and neck called a mane, whereas the females don't have a mane. The lions mane makes him look bigger, which can help scare away other males who may want to take over the pride. Also the mane helps to protect the males neck during fights with other males.

However, having this mane does make it difficult for the males to hunt as it can get caught in the bushes, as well as making it difficult to hide and sneak up on prey as it doesn't camouflage very well.

Our lions are only fed 6 days each week and will have one starve day. This starve day mimics natural feeding patterns in the wild where lions would not eat every day. It also allows their digestive system to deal with indigestible bones etc. The keepers hide the lions' food, or hang it on the feeding pole so the lions need to work to get their food.

Suricata suricatta

Meerkats

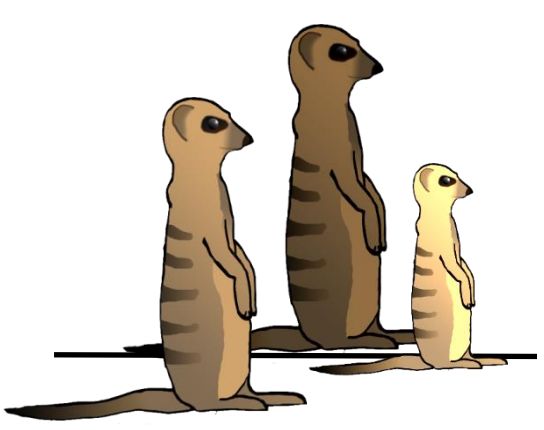
Habitat: Desert and savannahs
Distribution: Southern Africa, including Namibia, and South Africa
Diet: Varied include insects, scorpions, small mammals, eggs and lizards
Longevity: About 10 years in wild, up to 17 in captivity
Status: Not threatened (IUCN Red List)

Meerkats are mainly tan colour to help them camouflage. They also have broken dark brown stripes across their back and sides, and a black tip to their tail. Their black eye rings help them reduce glare and see further when they are watching for predators. When fully grown they are about 50cm long from nose to tail tip and weigh only 0.9kg.

Meerkats are a type of mongoose. Meerkats live in social groups called mobs of up to 20 members. Living in mobs helps them survive in their harsh desert and savannah habitats. Each individual has clearly defined jobs (e.g. sentry, baby-sitter, hunter, or teacher). Sentries stand upright, usually at the highest point (look on top of the logs in their enclosure) and watch the skies and all around for danger. If they sense danger, they let out a loud warning bark and the whole group disappears to hide in their burrows underground.

Colchester Zoo has one mob of Meerkats. The number of individuals change as new pups are born and older pups are moved to other zoos. Meerkats live in a female dominated society and the alpha female is in charge over the whole mob. She is the only female that is allowed to breed; she also chooses who the dominate male will be, and these two are they only ones to breed.

The Meerkats are fed mealworms (and other insects), fish, raw eggs, fruit and vegetables. These items are scattered around the enclosures and hidden in crevices, or under stones, so the meerkats have to search for them to encourage their natural foraging behaviour.



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Loxodonta africana

Elephants

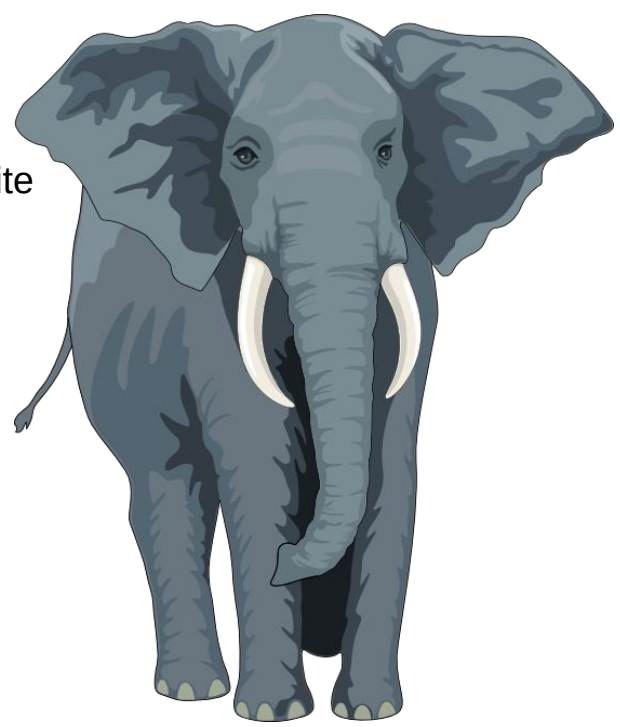
Habitat: Savannahs (bush elephant) or rainforests (forest elephant)
Distribution: Africa, south of the Sahara, mainly in reserves.
Diet: Grass, leaves, woody plants, shrubs, bark, flowers and fruits.
Longevity: Up to 60 years, longer in captivity
Status: Vulnerable (IUCN Red List)

Elephants are the largest land mammal on Earth. They weigh up to 6 metric tons, are up to 7.5m long and over 3m high. Males are larger than females. Their tusks are made of ivory and are modified front teeth. Elephants use their tusks to dig in the ground, knock bark off trees, and scare away predators. An elephant's trunk is a modified nose and upper lip. Elephants use their trunks for many purposes including drinking, squirting water, picking things up, breathing, and making noise (trumpeting). Because the trunk is their nose, they do not have any bones or teeth in it, but it does have 40,000 muscles!

Elephants live in complex social herds. Females form groups of closely related individuals led by the dominant female, called the matriarch. Males are sometimes solitary, or form groups with other males. Living in groups helps the elephants avoid predators. The only predator of adult elephants is humans, but baby elephants may be hunted by other predators, such as lions.

Elephants are vulnerable, with very few living outside of protected areas. One of the major threats elephants face is poaching and hunting for the ivory trade. Humans kill elephants and carve the tusks into statues, bracelets, and other souvenirs and trinkets.

Colchester Zoo's elephants have two paddocks. One paddock can be viewed from the Elephant Bush walk path and the second paddock is opposite The giraffe paddock.



Giraffes

Habitat: Savannah
Distribution: Eastern Africa, including Tanzania, Kenya, and Botswana
Diet: Feeds on leaves and shoots of trees and shrubs
Longevity: 25 years in the wild, longer in captivity
Status: Vulnerable (IUCN Red List)

Giraffes are the tallest animals in the world, up to 5.3m tall!
Giraffes have the same number of bones in their necks as humans (7 bones). The bones in the giraffe's neck are extra long, which is what makes their necks so long. Their long necks, and their 40cm long tongues are adaptations to help the giraffes reach food high up in trees that other animals can't reach. Their tongues are purple-black in colour; this acts as a natural sunblock and prevents the giraffes from getting a sunburnt tongue. Because giraffes are so tall, they find it hard to lie down and stand up quickly. Due to this, they only sleep for about 20 minutes a day.

Colchester Zoo have reticulated giraffes, which is one of the eight sub-species of giraffe. The other sub-species are: the Rothschild's Giraffe, the Angolan Giraffe, the Kordofan Giraffe, the Nubian Giraffe, the West African Giraffe, the Thornicroft's Giraffe and the Masai Giraffe. These sub-species are often found in different parts of Africa and also have different coat patterns, with some being lighter in shade whereas other are much darker as well as having different sized patches.

In dry weather our giraffes are often outside in the mixed paddock where they live with the rhino, zebra, kudu and ostrich. If it's too slippery and muddy they can be seen in their house. To see them in their stalls go up the ramp and inside the building.

Ceratotherium simum

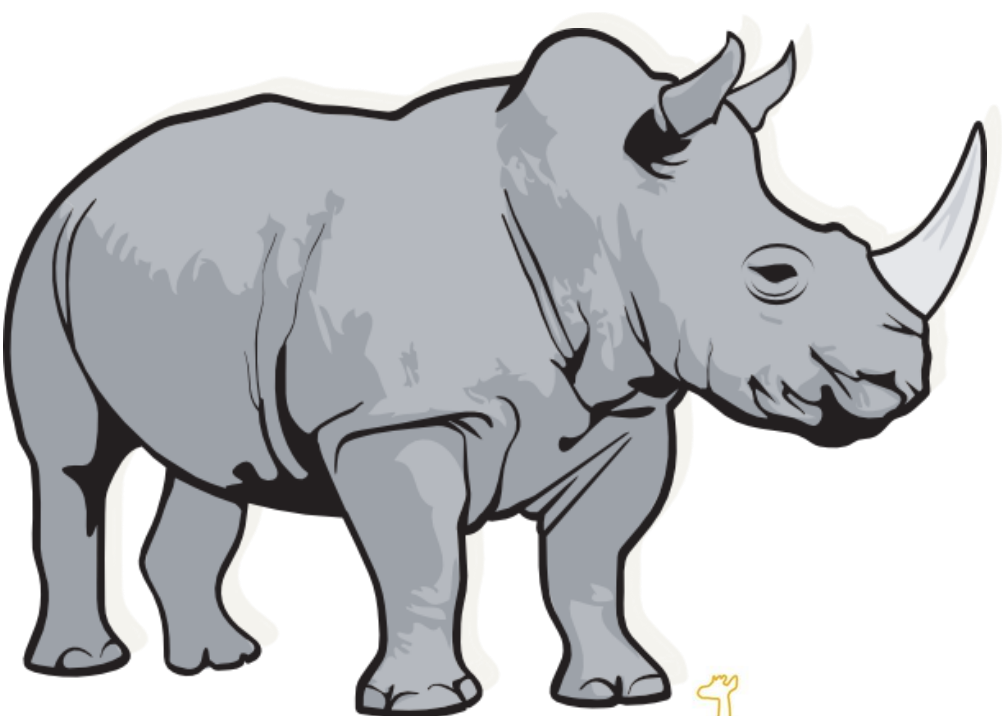
White Rhinoceros

Habitat: Savannah
Distribution: South and northeast Africa
Diet: Grazes on grasses and other vegetation
Longevity: 45 years in the wild, longer in captivity
Status: Near threatened (IUCN Red List)

White rhinos have straight lips, which is how to tell them apart from black rhinos which have a triangular shaped upper lip. This is because white rhinos graze, mainly eating grass and other plants on the ground, whereas black rhinos browse, mainly eating leaves.

Rhinos are large animals, up to 4m long and can weigh up to 2.3 metric tons. Rhinos have poor vision but are good at seeing movement (although they have a very hard time seeing details). They also have excellent senses of smell and hearing. If they see movement or hear or smell something that maybe a threat rhinos will charge with their horn lowered. Rhino horns are not bones, instead it is made entirely of keratin fibres. Keratin is the same material that makes up human hair and fingernails.

Rhinos are killed for their horns which is used to make dagger handles and trinkets. Rhino horn is also used as an ingredient in traditional medicine, even though science has proved there is no medical benefit of consuming rhino horn (it's like chewing on your fingernails when you have the flu, it won't make you better!). White rhinos were once extremely endangered, but thanks to conservation efforts their numbers have increased slightly. However, rhinos are still threatened due to poaching for their horns.



Crocuta crocuta

Spotted Hyenas

Habitat: Grassland and flat, open savannahs
Distribution: Africa south of the Sahara, except the Congo basin
Diet: Mainly large, hoofed mammals either hunted or scavenged
Longevity: Up to 25 years in the wild, 40 in captivity
Status: Least Concern (IUCN Red List)

Hyenas have large muzzles, big ears and powerful jaws for crunching bones. Females are larger and heavier than the males. Hyenas often live in large groups called clans, although some hyenas are solitary.

They hunt in groups and working together. They are true scavengers and hunters, eating almost everything they find, including bones and tendons that other animals won't eat. Hyenas in groups have a very complex social structure led by the dominant female. They communicate with complex vocalisation including many sounds such as: whoops, fast whoops, grunts, groans, low giggles, yells, growls, soft grunt-laughs, loud grunt-laughs, whines and soft squeals. They also communicate with scent marking and body language .

Although, not currently endangered, hyenas are often killed and persecuted because of their negative reputation. The IUCN has identified the hyena's negative reputation as a threat to the species survival.

Acinonyx jubatus

Cheetah

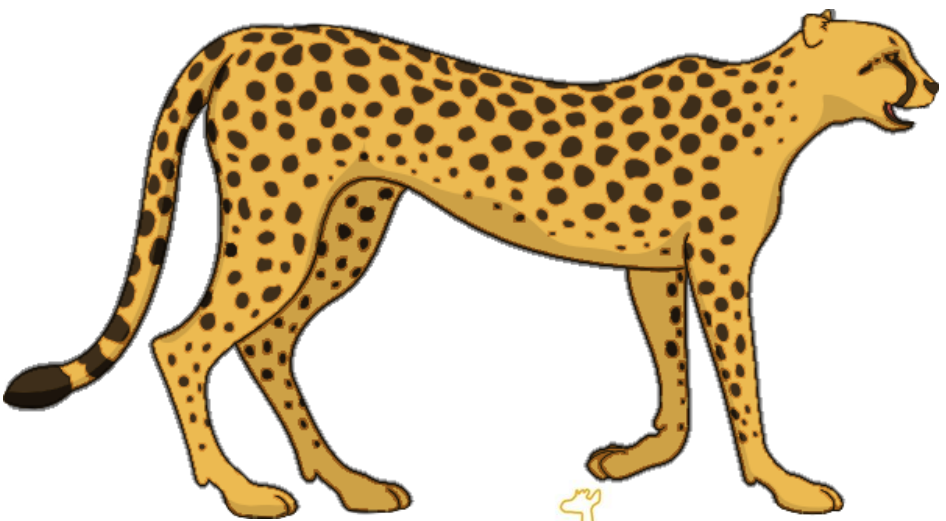
Habitat: Savannah
Distribution: Southern and eastern Africa, Middle East
Diet: Hooved mammals, hares, rodents and other small animals
Longevity: 12 years in the wild, up to 17 in captivity
Status: Vulnerable (IUCN red list)

The Cheetah is easily distinguished from other spotted cats by their skinny body, small head and exceptionally long tail and legs. They can weigh up to 60kg and stand between 60 and 80cm tall. On their face they have highly characteristic lines running from the corner of their eyes to their mouth, the rest of their coat is spotted.

Cheetahs have a unique way of catching their prey. Rather than stalking up close, Cheetahs will stalk a herd to within 30 metres or so, panic them, then sprint after one animal. From a standing start they can reach their top speed of 95km/h in about 3 seconds! They have highly flexible spines which can bend and flex allowing them to take long and rapid strides. Their claws help with traction since they are none retractable, whereas other cats can retract their claws. When they are close the cheetahs flick their front feet to knock the prey off balance and cause it to fall. If they do not manage to catch their prey fairly quickly they will give up, as running uses a lot of energy.

In the 1970's, cheetah populations were estimated at 15,000. Now there are only 7,500 known, and it's unlikely that there are more than 10,000 in the wild. Their population has declined at least 30% in the last 30 years. This decline is primarily because of habitat loss as well as killing cheetahs out of fear they prey on livestock and hunting for fur.

Colchester Zoo has successfully bred cheetahs in the past.



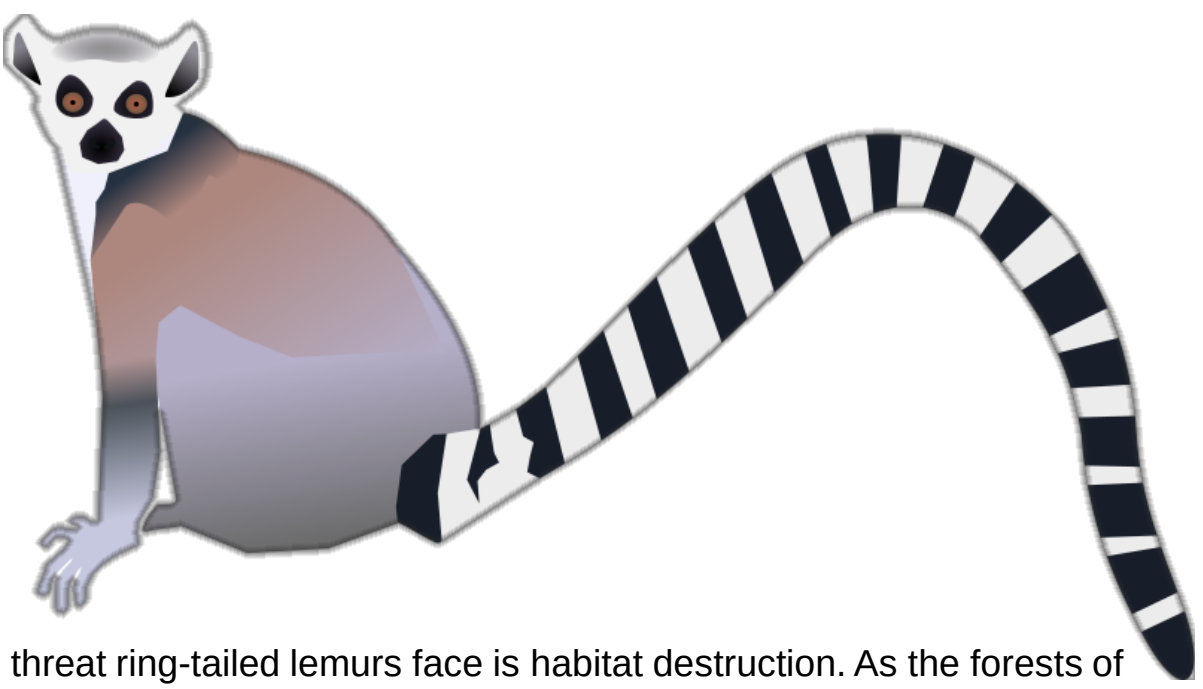
Lemur catta

Ring-Tailed Lemurs

Habitat: Deciduous forests and rainforests on Madagascar
Distribution: Southwest Madagascar
Diet: Mainly fruit, flowers and leaves (sometimes insects)
Longevity: 16-19 years in the wild, up to 27 in captivity
Status: Endangered (IUCN Red List)

Ring-tailed lemurs are the most easily recognised species of lemur due to their distinctive black and white ringed tail. Lemurs have small arms and longer legs with soft leathery skin to provide better grip. Other than their hands and feet, the ring-tailed lemur is covered in soft fur, which is grey on the back, and white underneath.

Ring-tailed lemurs are active during the day. They move around in trees but spend most their time on the ground looking for food or resting. Ring-tailed lemurs have a very characteristic sunbathing position, where they sit up and expose their underside to the sun. The fur on the underside is thinner, and they have very dark skin, and this position helps them to warm up quickly.



The main threat ring-tailed lemurs face is habitat destruction. As the forests of Madagascar are cleared for farming, this lemur (like other species of lemur) has no-where left to live. Lemurs are also hunted for food (bush meat) and caught as pets.

Colchester Zoo has two troops of ring-tailed lemurs. One troop is found in our Lost Madagascar walkthrough enclosure.

To get to Lost Madagascar, start your journey on the ranger guided road train. After riding the train you get a chance to walk in the enclosure with the lemurs! After visiting, ride the train back to the start, or exit next to the lions. All pupils, of any age, must be accompanied on the train.

Pan troglodytes

Chimpanzees

Habitat: **T**ropical rainforest and savannah
Distribution: Guinea and Ghana in West Africa, across to Tanzania
Diet: fruit, flowers, insects, and meat
Longevity: 40 - 45 years
Status: Endangered (IUCN red list)

Chimpanzees are human's close living animal relative. Their hind feet are adapted to climbing trees with a big toe just like a thumb. Like humans, chimps are omnivores. They eat a lot of fruit, and forage for this in small parties of 3-6 individuals. Chimps are very intelligent and use tools to extract insects from nests. Chimps also hunt in groups when going after larger prey such as young monkeys, wild pigs and antelopes.

Chimps are apes, not monkeys. One easy way to tell the difference is that apes do not have tails, but monkeys have tails.

Chimpanzees have many threats. The rainforests where they live are destroyed for logging and to make room for agriculture. Chimps are hunted by poachers for bush meat. Because they are related to humans, chimpanzees can also get sick and die from many of the same illnesses and disease that infect humans.

Colchester Zoo has a family troop. Male and female chimps are easy to tell apart because females have very large bottoms. Each individual has different facial features and behaviours, with some being more playful, or confident whereas others are more serious.

Choeropsis liberiensis

Pygmy Hippopotamus

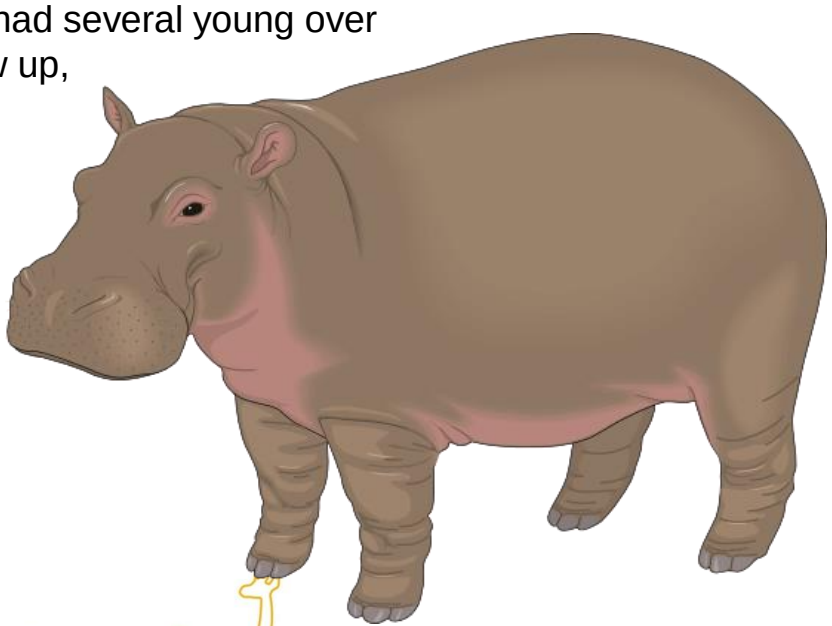
Habitat: **T**ropical rainforest and savannah
Distribution: Western Africa
Diet: Leaves, shoots, roots and fruit
Longevity: 35 years in the wild, up to 42 in captivity
Status: Endangered (IUCN red list)

The Pygmy hippo is much smaller than the common hippopotamus. It is only a metre tall at the shoulder and weighs just 272 kg. Young are about the size of a housecat. They have smooth, almost hairless skin that is brown-black. They secrete a white substance from their pores which acts as a moisturiser. Pygmy hippos do not have webbed toes (like the larger hippos) because they spend more time on land. When threatened, they retreat into forest cover rather than the water.

Despite their small size, pygmy hippos can be aggressive when threated or defending their territory. They are not social animals, preferring to live alone or in pairs, avoiding other hippos. Pygmy hippos have large territories, males cover 160 hectares, females 40—60 hectares. They have several resting places which they exclusively use for sleeping. They are nocturnal, usually active between 6pm and midnight when they wander around the forest floor in search of fallen fruit and other food.

Because pygmy hippos have such large ranges, they are severely affected by deforestation. They are also endangered due to being hunting for food and for their teeth. They are hard to study in the wild but estimates suggest there are fewer than 3,000 left in the wild.

Colchester Zoo has two adult pygmy hippos. They are part of an international breeding programme and have had several young over the years. When the young grow up, they move to other zoos around the world to aid with the progression of the breeding programme.



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Pre-Trip Classroom Ideas:

These are ideas to get teachers thinking about how to relate African animals to other subjects. Use these ideas as a starting point with or without the pre-made activities and worksheets on the next pages.

1. Learn vocabulary words with students (see next page for list)

2. Discuss the term 'endangered'. For older pupils investigate different levels of conservation status: extinct, endangered, threatened, least concern, etc.

3. Play a guessing game about zoo animals. Count and graph how many clues it takes for each animal. Which animals are easiest to guess?

4. Research food chains. Have students create a food chain showing how various African animals are connected. Students will need to research animal diets.

5. Plan an imaginary trip to Africa. Have students plan their travel routes and determine how long it will take to reach their destination. Students could also research destination cities, or national parks including information on populations, industries, and animals species that live there.

6. Start learning about the savannah by investigating a local grassland, such as a field. Learn about different types of grasses, and search for mini-beasts.

7. Use a Venn diagram to compare and contrast the UK and Africa. Draw two overlapping circle and fill them in. The areas where the circles overlap contain attributes they both share. The portions that don't overlap contain unique attributes. These Venn diagrams could focus on human populations, animals found there, ecosystems and habitats, geography, etc.

8. Cut pictures from magazines, or find pictures online and make a class collage of animals they want to see at the zoo. The collage could focus on animals with similar adaptations, animals that live in the same habitat, etc.

9. Read about what animals need to survive in their habitat. Pupils can design a zoo living space for their favourite animal. Make sure all the animals' needs are met. Follow this up at the zoo by investigating the enclosures and seeing how they compare.

10. Write descriptive words to describe zoo animals, for example describe: elephants trunk, rhinos horns, warthogs face, zebra stripes, etc.

Pre-Trip Classroom Ideas:

Vocabulary Words:

Adaptation:	A body part or behaviour that helps the animals survive (teeth, trunk, etc.)
Browser:	An animal that mainly eats leaves from trees and bushes
Camouflage:	Colours and patterns that help animal blend into its surroundings
Carnivore:	An animal that mainly eats meat
Desert:	A habitat where it is very dry with almost no rain. Very few plants.
Endangered:	Very few left, it faces major threats, and it might go extinct
Extinct:	Species that can no longer be found anywhere. They have died out
Grassland:	An ecosystem where the main plant is grass
Grazer:	An animal that mainly eats grass and other plants on ground level
Habitat:	The type of place an animal lives (e.g. savannah, rainforest, etc.)
Herbivore:	An animal that mainly eats plants
Omnivore:	An animal that eats plants and meat
Predator:	An animal that hunts and eats other animals
Prey:	An animal that is eaten by other animals
Rainforest:	A forest habitat with lots of plants, lots of animals and lots of rain (also called a jungle)
Savannah:	A tropical grassland habitat, with lots of grass, and few, sparse trees
Scavenger:	An animal that feeds on dead animals

Pre-Trip Classroom Activities:

Animal Mixer

How do animals communicate with each other? What makes animals unique and different from other animals? Pupils will think about this when they work to communicate without speaking

Time: 15 minutes
Ages: Reception and older (ages 5 and up)
Subjects: Drama, Physical Education, Science
Materials Required: Animal pictures, one per pupil

Start with a discussion of how animals communicate, and how the pupils would communicate if they were animals. For younger pupils it's a good idea to give examples (e.g. elephants trumpet, lions roar, etc.). They discuss how animals that don't make noise communicate. Do they twitch their whiskers, or stand in funny positions, or swish their tail? Once the students have all thought about how animals communicate, explain that they are going to become animals.

Many animals live in groups (can tie this into a discussion of hunting in packs or herd of zebra, etc.). Once they have all assumed their animal identities, the pupils need to find the rest of their animal group. However, they can't speak, so to find each other they must communicate like animals!

Explain that they will be given a picture of an animal they need to act like. When the pictures are handed out they should look at it, but they need to keep it secret and not tell anyone what it is. After everyone has a picture, have them get started and try to find the other pupils in their group by making the appropriate animal action/sound. Once they find someone in their group, stay with them and try and find more. Continue until all the animals are in their group. As a conclusion go through the groups and have each demonstrate how they managed to find each other.

* To make it easier, hand out the same number of pictures of each animal, e.g. in a class of 30 hand out 6 pictures of 5 different types of animals (6 elephants, 6 giraffes, etc.). To make it harder, have uneven groups of animals, e.g. 3 elephants, 9 rhinos, etc. Ensure you tell the pupils if the groups are uneven or they may be confused.

Pre-Trip Classroom Activities:

Food, Water, Shelter, Space

This activity helps pupils visualise the importance of good habitat

Time: 10-20 minutes
Ages: Year 2 and up (ages 6 and up)
Subjects: Physical Education, Maths
Materials Required: Cups and pom-poms

Prior to this activity teach the pupils the essential components of habitat: food, water, shelter and space. Review these components and create actions for them, e.g. food = rub belly, water = cupped hands to lips, shelter = hold hands over head, space = hold hands open wide.

Mark two parallel lines on the floor on either side of a room. Ask two volunteers to be zebra and have them stand behind one of the lines. The rest of the class is the habitat, have them stand behind the line on the other side.

Explain that the zebra need to find food, water, shelter and space in their habitat in order to survive. Have both groups turn around with their backs to each other. Everyone needs to choose a habitat component and make an action for them. Remind them that they are not allowed to change their action. At the teacher's signal, both groups turn continuing to show their component action. Habitat stays where they are, and the zebras run across the room and finds the habitat component that matches them. The zebras bring their matching habitat component back to their line, where they now become zebras, representing successful years resulting in more zebra offspring. Any zebra that don't find their match die, rot, and become part of the habitat, and go stand behind the habitat. Repeat.

After each round have the pupils count how many zebra are alive. Place pom-poms in the cups to represent this (two zebra, two pom-poms), with a new cup for each round. Each round represents a year. Continue the game for at least five years. Some years there will be lots of zebras, some years not as many.

At the end of the game, discuss what happened. Show the pom-poms and make a graph of them indicating the changing zebra population. Have older pupils construct graphs based on this data. Explain that the results show that when the habitat meets all their needs there can be many animals, and when the habitat has problems (e.g. drought with no water) the animal populations decline.

Pre-Trip Classroom Activities:

Rhino Ears

Rhinos have excellent hearing but a very poor sense of sight. What would it be like to be a rhino? Can they hear the predator coming?

Time: 15 minutes or more
Ages: Year 2 and up (ages 6 and up)
Subjects: Physical Education, Science
Materials Required: Blindfold, something that makes noise (bells, set of keys, etc.)

First discuss how animals rely on their sense of hearing to stay alive. Hearing allows many animals to avoid being eaten by predators and allows other animals to find their prey. Adult rhinos don't have many predators, but baby rhinos have a lot of predators. Rhino mothers protect their babies by listening for predators. Discuss predators of rhinos such as lions, hyenas or African hunting dogs.

Get the class to form a large circle and put one pupil in the middle. The child in the middle is the mother rhino, and the rest of the class are predators. Place the noise maker (set of jingly keys, bells, etc.) at the rhino's feet and explain that the noise maker is the baby rhino. Blindfold the rhino and tell him/her to listen carefully for any approaching predators.

The teacher should choose one predator silently (walk around the circle and touch on shoulder, point at pupils, etc.). The predator's job is to sneak very slowly and carefully and try and grab the baby rhino and make it back to the outside of the circle. It is sometimes useful (especially with younger groups) to have everyone practice sneaking quietly like predators before the game begins.

The rhino must listen for the approach of the predators. When the rhino hears a predator they point at them. If the predator has been pointed at, they have lost the element of surprise and go back to the outside of the circle. Select a new predator to sneak forward. All the other pupils in the circle must be quiet so they don't interfere with the predator who is sneaking up. If a predator successfully grabs the baby rhino and makes it to the outside of the circle, they can become the new rhino. Keep playing giving multiple pupils a turn to be the predators and the rhino. For older group consider having multiple predators sneaking up at the same time and tying it into a discussion of how many predators hunt in groups (packs, prides, clans, etc.).

Pre-Trip Classroom Activities:

African Habitat Map

Pupils learn about four African habitats: savannah, rainforest, deserts and mountains.

Time: 10-20 minutes
Ages: Year 3-5 (ages 7-10)
Subjects: Science, Geography
Materials Required: Map of Africa (found on the following page), four colours of crayons (per pupil)

Explain the four main habitats in Africa. Savannahs are grasslands with very few trees and are in tropical places. There is a wet and dry season on the savannah. Rainforests are places with lots of animals, lots of plants, and lots of rain. Deserts have very little rain and because of this they have very few plants. Mountains are very cold habitats with very few plants and very few animals. In winter mountains have deep snow.

In Africa, the north is the Sahara desert. In the south, there are other smaller deserts including the Kalahari. On the very west coast there is a lot of rain, so this area is a rainforest. On the east coast there are big mountains. Mount Kilimanjaro is the tallest mountain in Africa. In between these two habitats is the savannah.

Hand out copies of the map to each pupil and make sure they each have four different colours of crayons. Instruct the pupils to colour their map based on the key. After all pupils finish colouring, go through the points again and have them label their map key with the names of the habitats.

.The equator crosses the middle of the continent, so Africa has a tropical, warm climate, Have pupils draw a line for the equator.

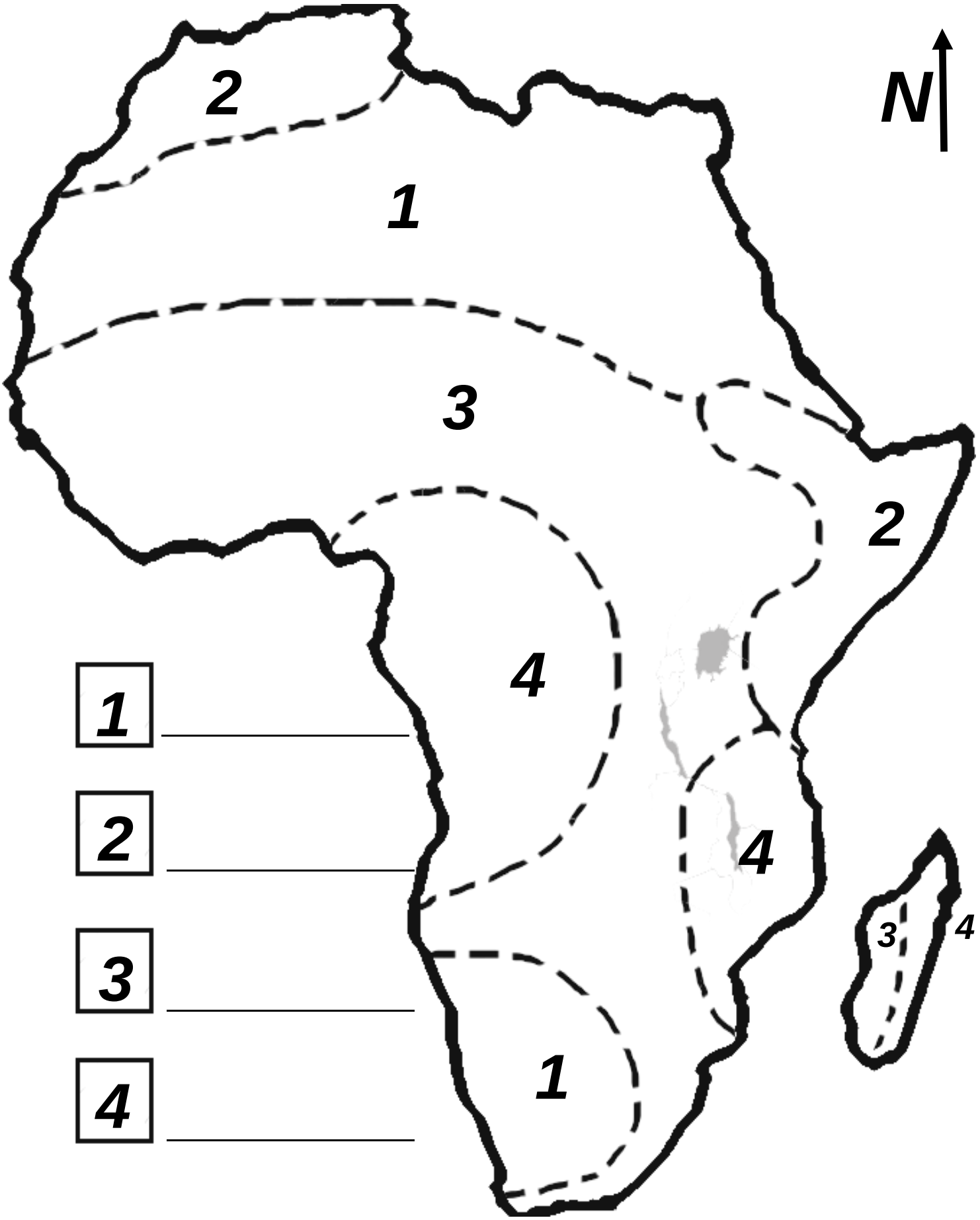
.The most rainfall is on the west and east coast, this is where the rainforests are.

.The least rainfall occurs in northern Africa and in the south. Because there is little rain, these areas are deserts.

.The big mountain ranges are in the north and east, stopping rain from reaching the middle areas.

.The areas between the rainforests and deserts receive a medium amount of rain during the wet season, but very little rain during the dry season, these are the savannahs.

African Habitat Map



1 _____

2 _____

3 _____

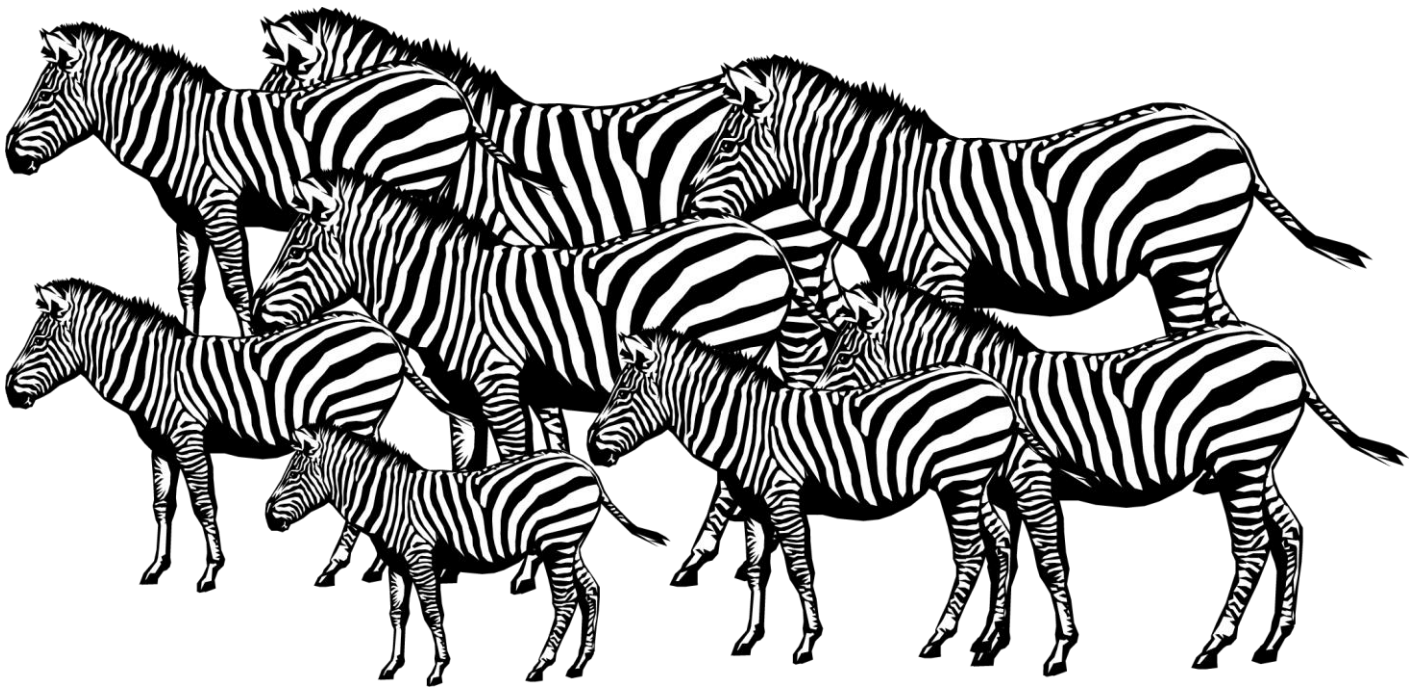
4 _____

Pre-trip Activity: Zebra Stripes

Ages: years 1-3 (ages 5-7)
Subjects: Science

Zebras are black and white.
Their stripes help them camouflage and confuse predators. They aren't hiding against the green grass, they are trying to hide next to each other.

Try and count the zebras below. Do their stripes make them difficult to count?



How many zebra are there?_____

Zebra stripes are all unique. Every single zebra has a different pattern.

Can you colour these two zebras with different patterns?

At the Zoo Ideas:

These are ideas to help your class focus during their trip to the zoo. Use these ideas as a starting point with or without the pre-made activities and worksheets on the next pages.

1. .Use the worksheets in this pack to help focus your students

2. .Encourage students to spend time observing the animals. Some unique animal behaviours can only be seen if we watch very carefully

3. .Have students make a detailed sketch of a zoo animal, sketching encourages careful observation

4. .Take photos of the animals and around the zoo. When you get back to school make a photo scrapbook of your trip.

5. .Attend the encounters or talks and have your students take notes. The keepers will tell you about the animals and the threats they may face in the wild. Often the keepers are available at the end to ask questions if you want to learn more.

6. .Observe the enclosures to determine what makes a good home for an animal. Pay attention for anything that looks like it's entertaining for the animals; zookeepers call these things enrichment. Enrichment for animals includes: problem solving, toys, interesting smells, and strange things (e.g. wellington boots, old brooms, etc.).

7. .Pupils can examine the animal enclosure and determine, if they were an animal at the Zoo, which enclosure would they want to live in and why?

At the Zoo Activities:

Camera

This activity gets students focusing quietly and independently. It works well when pupils are taking real photos to get them to decide what to take photos of beforehand.

Time: 15 minutes or more
Ages: Years 1 - 4 (ages 5-8)
Subjects: Art, ICT, observational Science skills
Materials Required: Cameras (optional), small bits of card (optional), pencils (optional).

Before starting, take time to talk with the pupils to consider what makes interesting subjects for good photos. Should they take close up images? Are walls interesting? Is it easier to take photos of an animal that moves a lot or an animal that's resting?

Find an animal that the pupils can stay focused on rather than get over excited when they see the animal. Divide the pupils into pairs. Within each pair one student takes the role of photographer and one takes the role of camera. The child pretending to be the camera keeps their eyes closed while the photographer leads them to an interesting viewpoint.

The photographer chooses when the camera opens their eyes and takes a picture. A good way to do this is to have the photographer gently tap the camera on their shoulder to have them open their eyes. When the camera opens their eyes, their job is to try to remember and visualise everything they see in front of them: Do they see an animal? How many animals? What is the enclosure like? What textures do they see? When taking photos it's best if the camera only has their eyes open for 5-10 seconds, then closes them again. Have the photographer move the camera to a few different locations. Do they see different animals? Is there a slightly different view point? After they've taken a few 'photos' have them switch roles.

Optional: If the group has actual cameras, have them all select their favourite photo from their activity and see if they can capture it using their real camera/s.

Optional: for an extended activity, hand out small bits of card to each pupil. Explain that they are going to process the photos they took with their eyes. Have them select their favourite image they photographed (real or with just their eyes) and have them draw the picture on the card, just like a photo.

At the Zoo Ideas: Senses Scavenger Hunt

Ages: years 1 - 4 (ages 5-8)
Subjects: Art, Science

Draw pictures of the animals or things when you find them:

SOMETHING SMELLY

SOMETHING HARD

SOMETHING WET

SOMETHING SPIKY

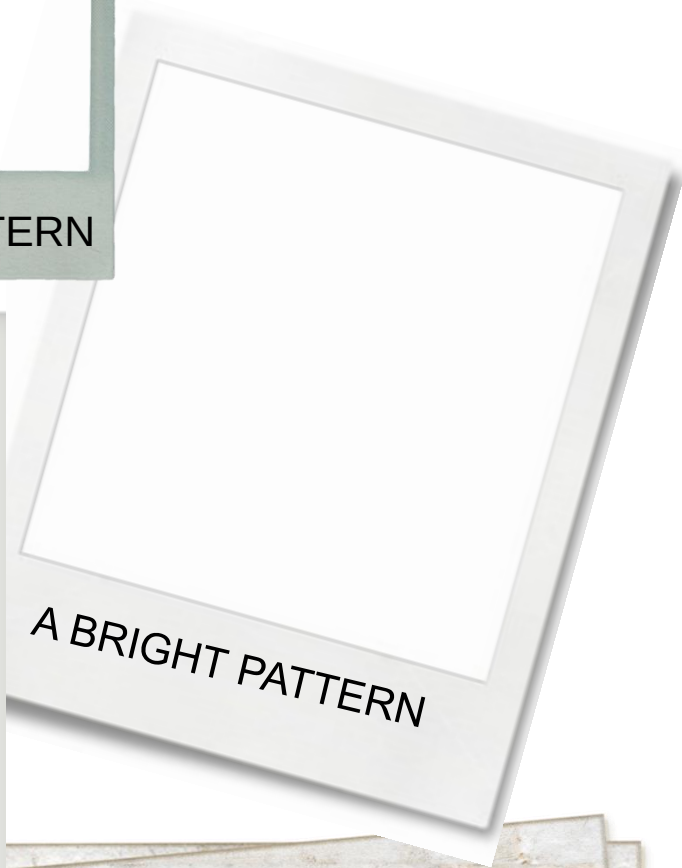
4 SOFT LOOKING THINGS

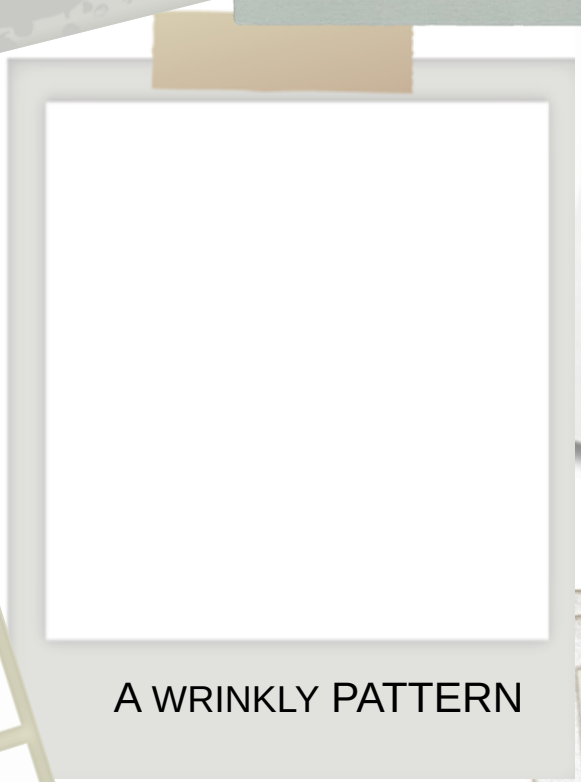
SOMETHING WARM

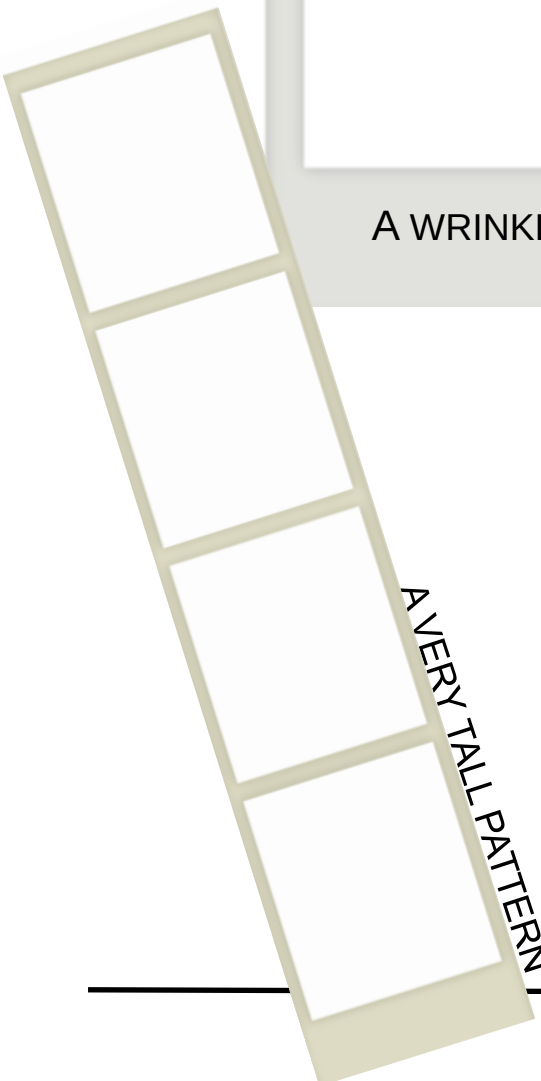
At the Zoo Ideas: Patterns Scavenger Hunt

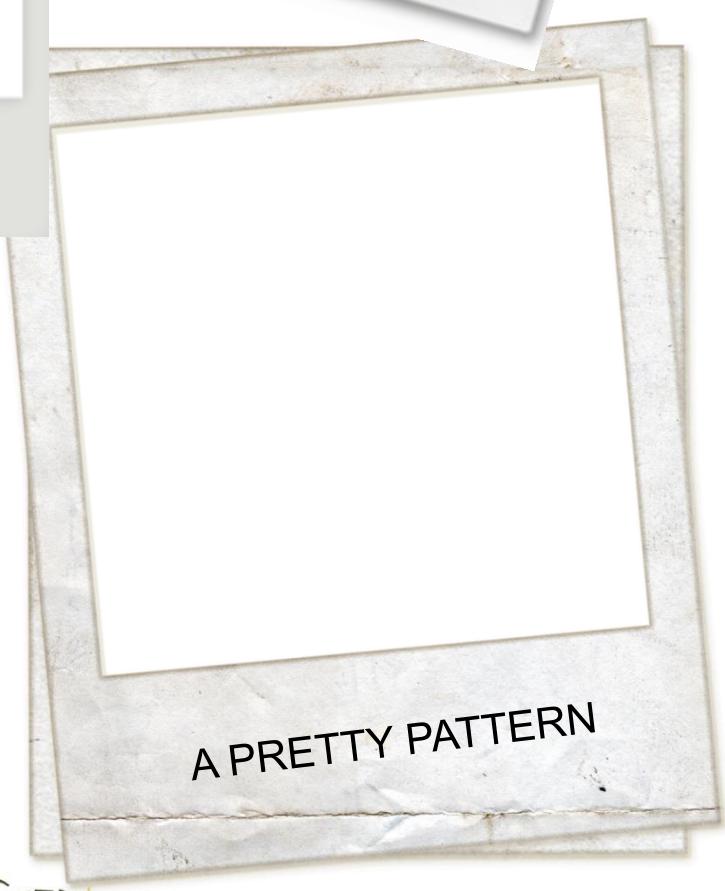
Ages: years 1 - 4 (ages 5-8)
Subjects: Art, Science

Draw pictures of the animals or things when you find them:









At the Zoo Ideas: African Safari Quiz

Ages: years 3-5 (ages 7-10)
Subjects: Science

Name:

1) Africa has which type of habitats (circle all that apply):

Rainforest	Desert	Savannah
Mountains	Polar	

2) Animals have adaptations to specific habitats. Choose one of the above habitats and write two adaptations you see for it:

1._____

2._____

3) Identify three animals that live in Africa:

1._____ 2._____ 3._____

4) Name one endangered African animal:

_____

5) List 2 reasons animals are endangered:

1._____ 2._____

6) What can you do to help these endangered animals?

_____

_____

_____

7) The largest African animal is_____

Draw a picture of it on the back of the sheet.

8) The African animal I like best is_____ because _____

At the Zoo Ideas: Animal Description

Ages: years 4-6 (ages 8-11)
Subjects: Science

What colour is it:_____

It is covered in (circle one): fur feathers scales

It looks a bit like a:
_____

It eats:_____

It lives in the:
_____ habitat

It is the size of a (make a comparison):_____

A cool adaptation it has is:_____

Something very special about it is:_____

_____ _____

At the Zoo Ideas: African Animal Research

Ages: years 3-8 (ages 7-13)
Subjects: Science

Name of animal:_____

Type of animal (mammal, bird, etc.):_____

Size (record weight and height, can be an estimate):_____

Type of body covering (fur, feathers, scales, etc.):_____

Draw the pattern of fur, scales, feathers, etc.

Mark on the map where it lives in the wild

How does your animal get its food? (grazer, chases prey, browser, etc.): _____

_____

What habitat does it live in:_____

How is it adapted to that habitat:_____

_____

What is the future of your animal in the wild? Why?

_____

_____

_____

_____ _____

At the Zoo Ideas: Observing Animal Behaviour

Name of animal:_____

Observe your animal for 10 minutes.
Make a mark each time it does one of the following:

Walks/Runs	Eats	Drinks	Lies down
Sleeps	Yawns	Looks at people	Plays

How can you identify your animal from others in their group:

_____

_____

Which animal in the group is the leader? How can you tell?

_____

_____

What do you think the animal is thinking/feeling (is it hungry? bored? sleepy? etc.)? Why do you think that?

_____

_____

_____

Many animals have things to do to keep them active. Can you see anything like that in your animals' enclosure?

_____

Did your animal interact with it? _____

What would you give the animal to do and why?_____

_____

_____

_____

_____

At the Zoo Ideas: Giraffe Watcher

Ages: years 3-8 (ages 7-13)
Subjects: Science

Draw a map of the zoos giraffe paddock on the grid below.
If the giraffes are indoors, select one of the other paddock animals.
Show landmarks like their pool, fences, and buildings.

1	2	3	4
5	6	7	8

Pick a giraffe to observe at the zoo. Look at the signs nearby to identify the name of your giraffe:_____

Every minute, record the time. Write the number of the grid where your giraffe is. Describe what your giraffe is doing.

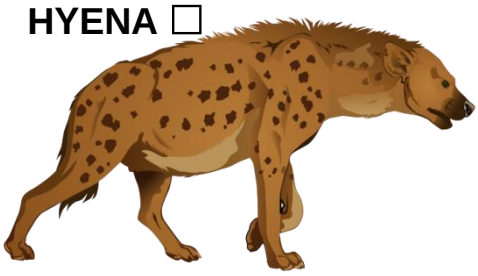
Time	Grid Number	Observations

At the Zoo: Animal Spotter's Guide - Beginner

On your trip to Colchester Zoo, be on the lookout for animals that come from Africa. Keep track of the ones you find by ticking them off as you go.

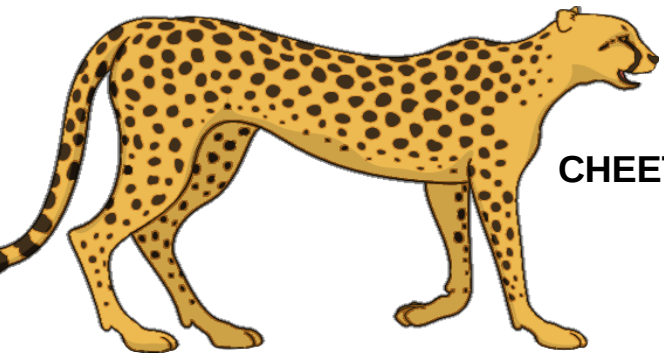
LION ☐

LEMUR ☐

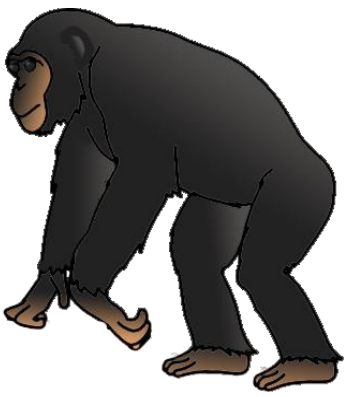


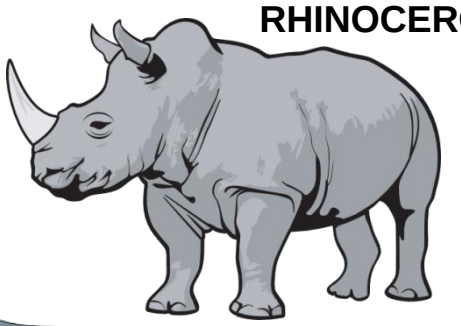
HYENA ☐

CHIMPANZEE ☐



CHEETAH ☐



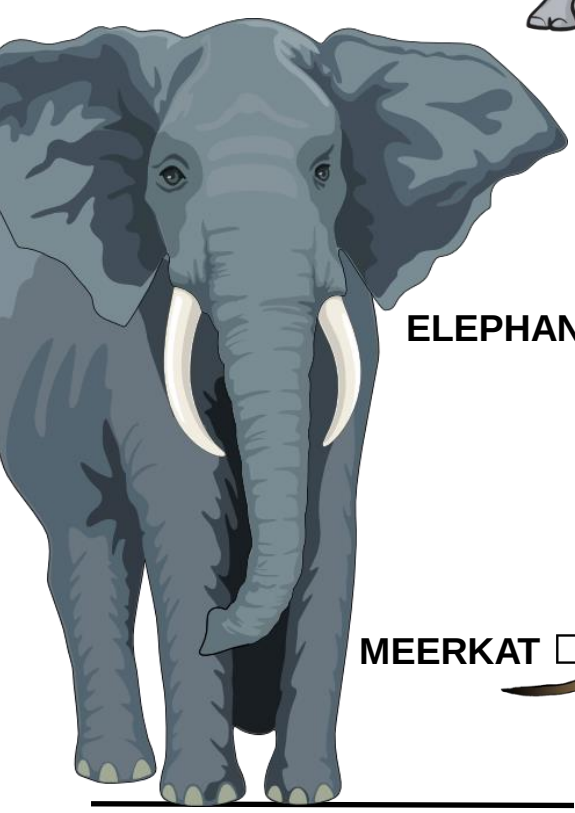


RHINOCEROS ☐

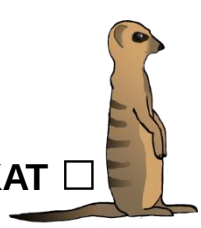
GIRAFFE ☐

OTHER? _____ ☐

ZEBRA ☐



ELEPHANT ☐



MEERKAT ☐

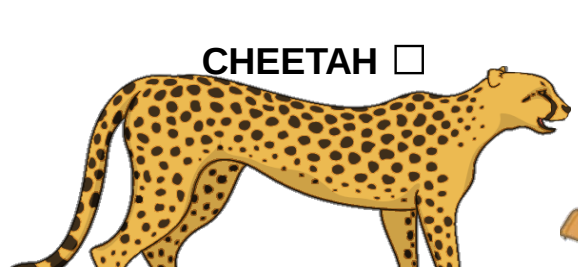
COLCHESTER ZOO
Action for the Wild

At the Zoo: Animal Spotter's Guide - Medium

On your trip to Colchester Zoo, be on the lookout for animals that come from Africa. Keep track of the ones you find by ticking them off as you go.

LION ☐

HYENA ☐

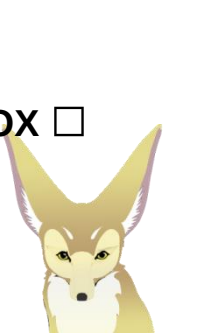


CHEETAH ☐

AARDVARK ☐

RHINOCEROS ☐

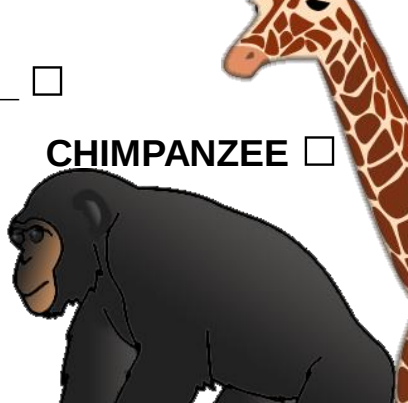
FENNEC FOX ☐



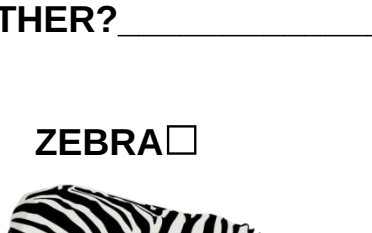
GIRAFFE ☐

OTHER?_____ ☐

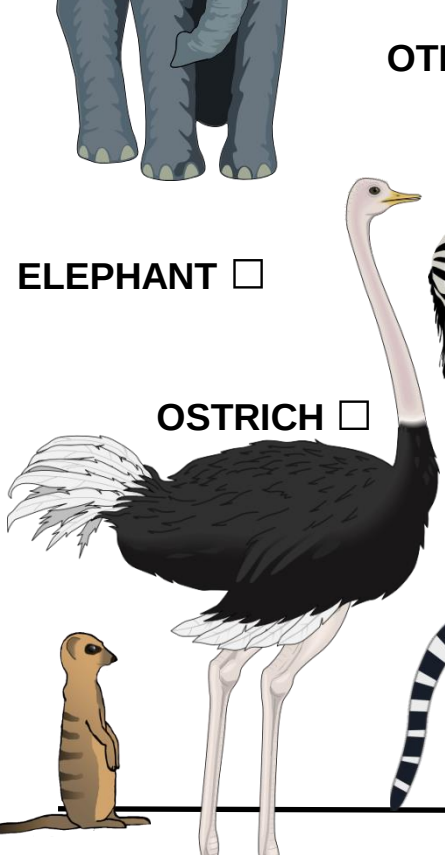
CHIMPANZEE ☐



ZEBRA☐



ELEPHANT ☐



OSTRICH ☐

LEMUR ☐

MEERKAT ☐

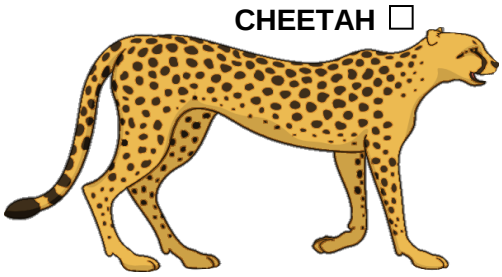
PYGMY HIPPO ☐

COLCHESTER ZOO
Action for the Wild

At the Zoo: Animal Spotter's Guide - Advanced

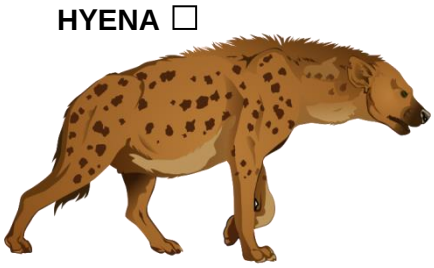
On your trip to Colchester Zoo, be on the lookout for animals that come from Africa. Keep track of the ones you find by ticking them off as you go.

CHEETAH ☐



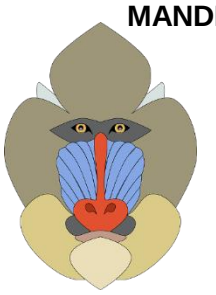
LION ☐

HYENA ☐

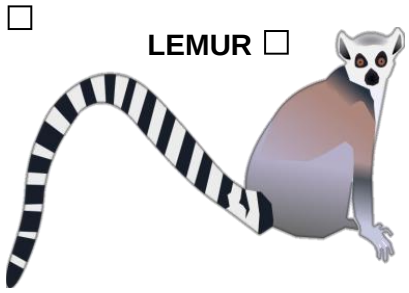


RUPPELL'S GRIFFON VULTURE ☐

MANDRILL ☐



LEMUR ☐

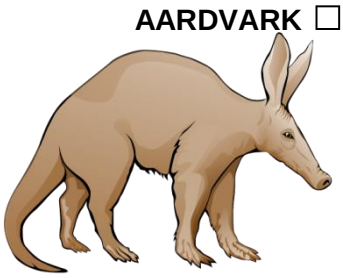


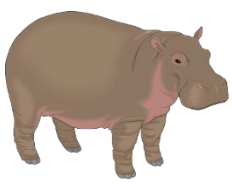
WARTHOG ☐

FENNEC FOX ☐

CHIMPANZEE ☐

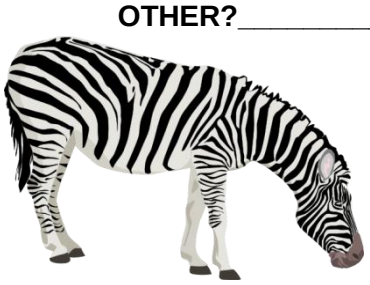
AARDVARK ☐





PYGMY HIPPO ☐

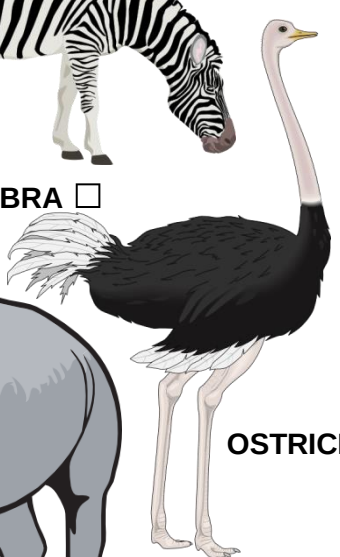
OTHER?_____ ☐



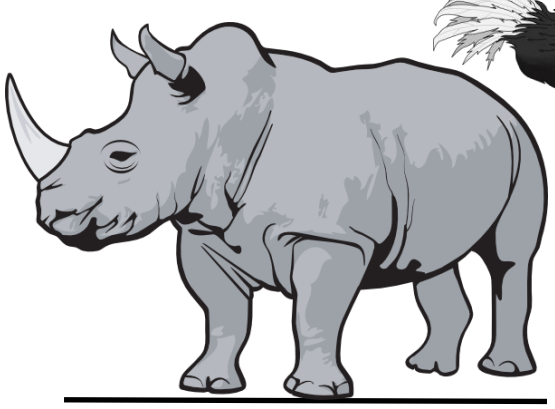
GIRAFFE ☐

MEERKAT ☐

ZEBRA ☐



OSTRICH ☐



RHINOCERAS ☐

ELEPHANT ☐

At the Zoo Ideas: Africa Paddock Maths ***Ages:*** *years 3 and up (ages 7 and up)*
Subjects: *Science, Maths*

Visit the Kingdom of the Wild Paddock (the mixed African animal paddock). See how many of these adaptations you can discover.

1) An average Zebra has up to 50 stripes.
_____ zebras were seen in the paddock today.

2) How many stripes were in the paddock?

_____
Total estimated stripes

3) Look closely at the ostrich. How many toes do they have? Check the track for a hint. _____ toes.
_____ ostriches were in the paddock today.

_____
Ostrich toes

4) How many ostrich toes were in the paddock? (remember how many legs they have!)

5) Giraffes have very long necks. However, they have just 7 bones in their neck, which the same number of neck bones humans have!
There were _____ giraffes in the paddock today.
How many giraffe neck bones were in the paddock?

_____
Giraffe neck bones

6) The crowned cranes have very pretty yellow crowns of feathers. There were _____ cranes in the paddock.
If each crown has an average of 24 feathers, how many yellow feather were in the paddock?

_____
Yellow Feathers

7) Greater kudu are the large, brown antelopes. They have two very large ears to listen for predators. How many kudu are in the paddock_____. How many ears?

_____
Kudu ears

8) White rhinos have one big horn and a smaller one. Rhino horns are made out of keratin, the same material in human fingernails.
How many rhinos were in the paddock today?_____
How many big horns?

_____
Big rhino horns

Post-Trip Classroom Ideas:

These are ideas to give teachers ideas on how to relate a school trip to Colchester Zoo to subjects back at school. Use these ideas as a starting point with or without the pre-made activities and worksheets on the next pages.

1. During the trip have students choose a specific African animal and gather information about it. After the trip have them conduct more in-depth research based on what they observed.

2. Choose one of the species they saw at the zoo that is endangered and have them research its threats to learn about why it's endangered.

3. Research human cultures in the places these animals live. Learn about food and customs. Learn the names of animals you saw in other languages.

4. Construct a diorama of an African habitat. Encourage students to include the natural features they would find in the habitat as well as three or four animals. They should be able to explain how the animals are adapted to that specific habitat.

5. Have pupils write animal poetry about the animals they saw at the zoo.

6. Create a 'zoo guide book' of your school trip to Colchester Zoo. Have students write articles about the animals they saw. Include pictures/sketches they made during the trip.

7. Draw and design a comic strip about two animals at the zoo. Include what they are doing and what they would say to each other.

8. Using their memory, pupils can create a map of the zoo. Include animals that they saw and areas they remember (including food, toilets, play areas, etc.). After drawing from memory compare their maps to an actual map of the zoo. What's different?

9. Design posters to help endangered species you saw at the zoo. Remind pupils to include lots of facts they learned as well as make it eye-catching and decorative.

Draw an animal that would like to live in this habitat

Post-Trip Classroom Activities:

Create a Creature

Pupils will use their knowledge about animal adaptations to create a creature

Time: 30+ minutes
Ages: Year 1 –5 up (ages 5-10)
Subjects: Science, Art
Materials Required: Potato for each pupil, toothpicks, craft supplies, glue, coloured paper.

Explain to the pupils that they will be building an imaginary animal that is adapted to one of the habitats in Africa, the savannah. They will use the potato as the body for the animal and can stick in toothpicks/pipe-cleaners/paperclips for legs (if it has legs!). Encourage them to be creative and add anything else than can think of from other materials.

Remind them to think about:

- What does their animal eat? What food is available on the savannah
- How does it survive in the dry season when there can be drought, and in the wet season when areas can flood? For example; do they migrate, dig for water?
- How does it avoid predators? Or
- How does it hunt?

After the pupils have finished construction, have each pupil name and describe their animal. Pupils can share the adaptations with the group.

For a longer activity, after they are finished have pupils compare their creations to real animals that they saw at the zoo. Which animal is the closest match?

Post-Trip Classroom Activities:

Who Am I

This works as either an introduction to African animals, or a reminder at the conclusion of a unit about what the pupils have learned.

Time: 10-20 minutes
Ages: Year 2 and up (ages 5 and up)
Subjects: Science
Materials Required: Pictures of different African animals, safety pins

Have the pupils stand in a line with their backs to the teacher. The teacher pins an animal picture to their back using the safety pins. The pupils should not see the pictures and are not supposed to know what their animal is, everyone else can see their picture.

Have pupils walk around the room and ask questions to each other to guess what animal is on their back. Pupils are only allowed to ask yes or no questions (no asking what their animal is called!). Encourage pupils to ask questions based on information they have already learned. For example, if studying food chains have them ask: am I a predator? If studying colour and camouflage have them ask: do I have stripes? If studying classification, have them ask: am I a mammal?. To make the pupils interact more, and ask more varied questions, have a rule that they can only ask another pupil one question, then they need to find someone else to ask.

After a pupil has guessed their animal, take the picture off their back and show it to them. If they have finished very fast, or you want the game to go on longer, give them another one to keep guessing. Depending on how hard the pictures are, some pupils will correctly guess 3 or 4 while some are still guessing their 1st. If some students are struggling, give them hints to make sure everyone guesses at least one correctly before ending the game.

To make this activity easier, review all the animal pictures to start. For older groups do not review the animals and consider using more obscure African animals (e.g. rock hyrax, gelada baboon, etc.). If you are using harder animals, make sure they are ones the pupils already know. For harder animals, consider having a label on the picture with the animals name so that the other pupils are giving correct information.

Post-Trip Classroom Activities:

Animal Poetry

Pupils use their knowledge of African animals to write poetry.

Time: 15-30 minutes
Ages: Year 3-8 (ages 7-13)
Subjects: Literacy
Materials Required: None

Introduce the pupils to different forms of poetry, for example, haiku, cinquain, and acrostic. Show them the example poems. After the pupils are familiar with the concept, they should choose an African animal that they saw at the zoo. Using their memory and imagination they can try and write poetry about the animals they saw.

Haiku
Originating in Japan, the haiku is three line of poetry, following the pattern of five syllables, seven syllables and ending with five syllables. The lines do not need to rhyme. For example:

Fast, stripy zebra	(five syllables)
Running over savannah,	(seven syllables)
Cheetah is faster.	(five syllables)

Cinquain
Cinquain poems have five lines and have specific pattern. Word cinquains are based on the number of words in a line. For example:

Hyena	(one word—an animal)
Clever, cunning.	(two words that describe it)
Stalking wary antelope.	(three words expressing action)
King of the savannah.	(four words explain how you feel about it)
Predator	(sum up with one word)

Acrostic
These are poems where the first letter (or syllable or word, etc.) spell out a word or message. The easiest is spelling out the name of an animals (for older children try hiding messages).
For example:

Rhinoceros are
Hunted for their horns.
Included in medicine, even though there is
No point, rhino horn is not medicinal.
One day soon, they'll be none left.

Post-Trip Classroom Activities:

Food Webs

This reinforces concepts about interdependency of animals in habitats

Time: 10 minutes
Ages: Year 1 and up (ages 5 and up)
Subjects: Science
Materials Required: String or wool, pictures of different African plants and animals (optional)

Have the pupils form a circle. Get them all to name plants and animals that live in Africa. Hand out pictures of different plants and animals, or have the pupils remember their answers. Give the ball of string/wool to one of the plants, e.g. an acacia tree. Then ask if any of the animals would eat an acacia tree. Find an animal, e.g. a giraffe, and hand the ball of string/wool to the giraffe (the acacia tree should keep holding the end). Now ask what would eat a giraffe, a predator, e.g. a lion. Hand the ball string/wool to the lion.

Continue connecting the pupils, with the string/wool representing the relationship between the plants and animals. Consider other connections as well, e.g. this bird lays eggs, what would eat the eggs? This animal poops, what might use the poop? etc. Continue until all the pupils are connected together by the string/wool. It should now look like a messy, interconnected web.

Investigate what happens to food webs if one element is removed. For example, ask what would happen if the savannah is turned into farm land, the acacia tree would be cut down. Have the pupil who is the acacia tree let go of the string/wool. Now, any other pupil whose string/wool is loose (they were connected to the tree) should also let go. Use this to reinforce discussions of threats African animals face, and how important all the parts are for a healthy ecosystem.

Post-Trip Classroom Activities:

Home and Away

Reinforces which African animals live in what habitats

Time: 10 minutes
Ages: Years 1-4 (ages 5-9)
Subjects: Geography, Science
Materials Required: Pictures of different habitats and animals

Introduce the pupils to the idea that different animals live in different habitats. Would a rhino want to live in the rainforest? Would the chimpanzees want to live in the desert? Animals have specific adaptations that help them live in different places. Discuss different adaptations that let animals live in different places (e.g. warm fur for cold places, big ears for hot places, etc.)

As a class, identify key habitat components of different African habitats:

- Rainforest – lots of rain, very hot, lots of food, etc.
- Savannah—two seasons (wet and dry), a few trees, scrubby grass, etc.
- Desert—very little rain, very few plants, often very hot, cold at night, etc.
- Mountains—cold, not many plants (so not a lot of food), deep snow, etc.

After identifying the key components of each habitat, place pictures of the different habitats around the room. Explain that you will be holding up pictures of different African animals and the pupils job is to run to the habitat they think it would like to live in.

When holding up the pictures, give some facts about the animals to help pupils guess where it lives. After the game, go over the animals and discuss where they live and their adaptations in more detail. Some potential animals to use in the game include:

- Desert: African spurred tortoise, fennec fox, aardvark
- Mountain: colobus monkey, gelada baboon, rock hyrax
- Rainforest: chimpanzee, pygmy hippo, elephant (forest elephants), mandrill
- Savannah: elephant (bush elephant), cheetah, lion, hunting dog, hyena, zebra

Post-Trip Classroom Activities:

Ecosystem Tag

This is a running game that reinforces concepts about predators/prey and different levels in ecosystems.

Time: 20-30 minutes
Ages: Year 4 and up (age 8 and up)
Subjects: Physical Education, Science
Materials Required: Arm bands (fabric strips to identify consumers and decomposers); energy chips (bits of card, pom-poms, etc.); pictures of different ecosystem levels

Before beginning this activity, review what an ecosystem is. Remind pupils of the different levels in food webs including producers (plants, e.g. acacia trees, savannah grass), consumers (most animals, e.g. lions, zebras, etc.) and decomposers (insects, worms, bacteria, giant African land snails, etc.).

Divide the pupils into three groups: decomposers, consumers (twice the number of decomposers), and producers (twice the number of consumers) (e.g. 2 decomposers, 4 consumers, 8 producers). Set a boundary for the playing area representing the size of the ecosystem. The energy chips represent energy from the sun, there should be more of these than producers. Place these objects in a box/bucket/etc. in the centre of the playing area.

Each producer takes one energy chip from the box. They can only have one chip at a time, but if they lose it, they can get a new one from the box, because producers can make their own energy from the sun. Consumers get energy from eating producers. The consumers in this game tag the producers and are given their energy chip. Consumers can hold as many energy chips as they can get. The decomposers get to take the energy from the consumers and put it back into the ecosystem. Decomposers tag the consumers and take away ALL their energy chips. When decomposers have the energy chips they put them back in the box/bucket for the producers (plants) to use again.

When the game has been played for a while, ask the pupils how long the game could continue. The answer is forever! But what would happen if there weren't decomposers? Play again to find out what happens without one of the groups. At the end, discuss how each group in the food web is important and has a specific role to play.

Post-Trip Classroom Activities:

Conservation Debate

Pupils role play different opinions about conservation.

Time: 20-30 minutes
Ages: Year 4 and up (age 8 and up)
Subjects: Science, Drama, Citizenship
Materials Required: Copies of opinions and questions for each group (or write on board)

Many African animals are endangered, and may go extinct. One reason they're endangered is poaching (illegal hunting). Elephants are poached for their ivory tusks. Their tusks are carved into jewellery and ornaments.

Divide your pupils into groups and assign one opinion to each group. Have them pretend to have that opinion and answer the questions (with the opinion of that person, not their own opinion). Next, mix the groups up, so one pupil with each of the opinion is in all of the new groups (one farmer, one ranger, one tourist). Have them debate their opinions in this new group and try and answer the questions again.

After the smaller groups have discussed their opinions, have each group share their answers with the entire class. What was each groups opinion? Did any of the groups have the same solution for the problem?

As an extension activity have pupils try to determine other groups who might have different opinions about elephants (other than farmers, rangers, and tourists). Repeat the activity with more opinions. Does that make it easier or harder to reach a solution?

Post-Trip Classroom Activities:

Conservation Debate: Opinions and Questions

African Farmer: My family is poor. I barely have enough food for my family. Sometimes I can sell extra eggs from my chickens, or get work in town. Even with that, I only earn £150-£200 a year. We need money for seeds for the farm. When my children are sick I need extra money for medicine. Recently, a man told me he would pay me £500 for a pair of elephant tusks! That's more money than I make in a year farming! Just think of what I could buy, food, clothing, medicine, maybe even toys for the children!

African Wildlife Ranger: We must stop illegal hunting at all costs. One elephant killed for ivory is too many! I've asked the government for stronger laws to protect the elephants and other game animals. There is so much money involved, people are willing to do awful things. The poachers killing the elephants make a few hundred pounds, but the ivory dealers selling it will make thousands. The elephant is an important symbol of Africa. They are unique, beautiful and essential to the ecosystem. We must protect them at all costs.

UK Tourist: I've always dreamed of taking a trip to Africa to see the amazing wildlife. I'm saving money to go, because I know a good trip with an excellent guide will cost a lot. I'm happy to spend a lot of money because seeing these amazing animals in the wild is worth it. But I need to go soon before the animals become extinct. I'm most excited about seeing the Elephants. If there were no more elephants, I don't think I'd bother taking a trip to Africa.

Questions to think about:

Do you think endangered species are more important then buying toys?
Who should get the money spent by tourists?
How should the farmer make money?
How would you solve the problem of elephant poaching?
Who would benefit from this proposal? Is it fair?

UmPhafa Private Nature Reserve

UmPhafa is a nature reserve in South Africa, owned and managed by Colchester Zoo. We work there to protect and conserve African wildlife in Africa. The reserve is located in KwaZulu Natal and is 4,500 hectares.

It's a private reserve, which means people can't go there on holidays, or pay money to see the animals. It's not a tourist attraction, it's a real wild place to protect animals and learn more about them. Rangers work there to protect the animals, and interns can volunteer to help them out.

The reserve website: www.umphafa.com has more information about UmPhafa including wildlife research projects, facts about the animals, and a photo gallery.

Check out the next page for lesson ideas which will allow your students to learn about this amazing place!

UMPHAFA

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UmPhafa Reserve Activities

If you're learning about Africa, or wildlife conservation, consider these ideas to help relate your learning to our nature reserve:

(Make sure to check out the website for facts, info and pictures www.umphafa.com)

1. The name 'UmPhafa' is the Zulu name for the 'Buffalo Thorn Tree'. In the Afrikaans language the tree is called the 'Wag-'n-Bietjie Tree'. Have students research the meaning behind these different names and find out why the UmPhafa tree is so important in South Africa.

2. UmPhafa trees are very different than trees which grow in the UK. Learn how to identify local, native trees. Go out to a park and practice identifying the trees after learning about them. Which trees are most like the UmPhafa tree? Why do students think those plants have similar adaptations?

3. Rangers at the reserve use wildlife cameras to track hard to spot animals on the reserve (e.g. leopards, hyenas). Check out the UmPhafa twitter feed for pictures, or find other wildlife camera pictures online. Can your students identify the animals from the photographs the same way the rangers do?

4. Staff from UmPhafa work closely with local schools to help children understand the importance of protecting native wildlife. Using the internet, research what a day as a child in a small rural village in South Africa might be like. Have your students discuss how this is different compared to a normal school day for them. As a follow up activity, research what life is like for a child in one of South Africa's major cities. How is this different than a rural village? How it is different from where you live?

5. UmPhafa protects a lot of wildlife, it is 4,500 hectares. Research and use math skills to find comparable protected nature reserves in the UK.

6. Read the details about all the species released onto the reserve: www.umphafa.com/about/umphafa-species (click the link on the page for a PDF list with photos). Most of these species are herbivores. Discuss as a class why the reserve has so many more herbivores than predators. An eventual aim of the reserve is to establish a cheetah population. What does the class think must be done before cheetahs can be released?

UmPhafa Reserve Research

A major function of UmPhafa Private Nature Reserve is scientific research to better understand the ecology and behaviour of wild African animals. This research is vital to developing better conservation methods and helping to save endangered species.

Past scientific research papers are available to download online from the website www.umphafa.com/placements/research-placements/past-research-projects
(click through the links to find and download project summaries; full papers also available)

For older science students, consider these potential classroom ideas for your students to practice reading and interpreting real scientific data:

1. Have students read the five research report summaries relating to giraffe feeding behaviour/preference. Based on the scientific research, have students answer the following questions:

- Which species do the giraffes prefer to eat?
- Does this change in the wet vs. dry season?
- Does this change in young giraffes vs. older giraffes?
- Do all the research papers present the same findings, and if any are contradictory, why do the students think these differences might occur?
- What do these conclusions mean for giraffe conservation?

2. Have students read the three research report summaries relating to jackal feeding (under the 'other research' category). Based on the scientific research, have students answer the following questions:

- What was the most popular/common food for jackals?
- Did any study find that jackals prey on livestock?
- Why are these types of studies important to jackal conservation efforts?
- More research is needed on this subject; most importantly, at what time of year should this research be repeated and why?

3. Have students read a variety of research report summaries and answer the following questions:

- Do projects on similar topics use the same research methods? Why or why not?
- What topic was most popular to research?
- Why do you think it was the most popular

After discussing these answers, have students read through the priority research document www.umphafa.com/placements/research-placements/priority-research

- Do the research projects conducted make sense given the priorities?

We hope you enjoyed your trip to

COLCHESTER ZOO
Action for the Wild

Learning about

AFRICAN ANIMALS